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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,789	10/27/2003	Thomas L. Toth	GEMS8081.193	2788
27061	7590	12/08/2005	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (GEMS)			KAO, CHIH CHENG G	
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MEQUON, WI 53097			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/605,789

Applicant(s)

TOTH ET AL.

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005 and 30 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/30/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 and 10 are objected to because of the following informalities, which appear to be minor draft errors including lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following corrections may obviate their respective objections: (claim 1, line 11, "connecting the body"; inserting - -of the second filter- - after "the body"), (claim 1, line 11, "the body formed"; inserting - -of the second filter- - after "the body"), (claim 10, line 2, "the base"; replacing "base" with - -body- -), and (claim 10, line 8, "the base"; replacing "base" with - -body- -),

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US Patent 4181858).

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3. Regarding claim 1, Moore discloses an apparatus comprising a first moveable filter having a non-uniform thickness (fig. 2a, #26 on top), the first moveable filter having a body (fig. 2a, body of #26 on the right), a tail (fig. 2a, #26'), and a curved portion (fig. 2a, portion between the body and 26') connecting the body (fig. 2a, body of #26 on the right) to the tail (fig. 2a, #26'), the body formed at a first terminal end (fig. 2a, #26 on the right) and the tail extending to a second terminal end (fig. 2a, #26' on the left) opposite the first terminal end, the tail positioned at a distal end (fig. 2a, #26') of the first moveable filter relative to an x-ray source designed to project x-rays from a focal point (fig. 1a, #14), and the body, the curved portion, and the tail constructed to establish an attenuation profile such that a maximum attenuation is defined by the body and a minimum attenuation is defined by the tail (fig. 2a, and col. 6, lines 9-17), a second moveable filter (fig. 2a, #26 on bottom) independent of the first moveable filter (fig. 2a, #26 on top) and having a non-uniform thickness, the second moveable filter have a body (fig. 2a, body of #26 on left), a tail (fig. 2a, #26'), and a curved portion (fig. 2a, portion between the body and 26') connecting the body of the second filter to the tail of the second filter, the body of the second filter formed at a first terminal end (fig. 2a, #26 on the left) and the tail of the second filter extending to a second terminal end (fig. 2a, #26' on the right) opposite the first terminal end, the tail of the second filter positioned at an end (fig. 2a, #26' on the right) of the second moveable filter (fig. 2a, #26 on the bottom) relative to the x-ray source (fig. 1a, #15), and the body of the second filter, the curved portion of the second filter, and the tail of the second filter constructed to establish an attenuation profile such that a maximum attenuation is defined by the body of the second filter and a minimum attenuation is defined by the tail of the second filter (fig. 2a, and col. 6, lines 9-17), and wherein at least one of the first moveable filter (fig. 2a, #26

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on the top) and the second moveable filter (fig. 2a, #26 on the bottom) is configured to be placed in a high frequency electromagnetic energy beam (fig. 1a, from #14) for attenuation of the beam (col. 6, lines 9-17) for radiographic data acquisition (fig. 1a, with #17) and wherein the first moveable filter (fig. 1a, #26 on top) is positioned nearer to the x-ray source focal point (fig. 1a, #14) than the second moveable filter (fig. 1a, #26 on bottom), and at least one motor assembly (fig. 2a, #30) configured to independently position a moveable filter (fig. 2a, #26 on top) such that a beam profile is created that substantially conforms to a shape of a subject to be scanned (col. 6, lines 14-17).

However, Moore does not disclose the tail of the second filter positioned at a distal end of the second moveable filter relative to the x-ray source.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Moore with the tail of the second filter positioned at a distal end of the second moveable filter relative to the x-ray source, since rearranging parts of an invention involves only routine skill in the art. One would be motivated to make such a modification to create more area for placing sensors and to reduce components holding sensors (fig. 3a) as implied from Moore.

4. Regarding claim 2, Moore further discloses wherein the second moveable filter (fig. 2a, #26 on the bottom) has a shape that mirrors that of the first moveable filter (fig. 2a, #26 on the top).

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5. Regarding claim 8, Moore further teaches wherein a body (fig. 3a, right section of #26 on top) has a thickness greater than that of a tail (fig. 3a, left section of #26 on top).

6. Regarding claims 9 and 10, Moore as modified above suggests an apparatus as recited above.

However, Moore does not disclose wherein a body has a thickness of 30 mm and a tail has a thickness of 0.25 mm, or wherein the body of the first moveable filter has a length along an x-direction of 112 mm; wherein the curved portion of the first moveable filter has a length along the x-direction of 24.9 mm; wherein the tail of the first moveable filter has a length along the x-direction of 135 mm; wherein the body of the second moveable filter has a length along the x-direction of 53 mm; wherein the tail of the second moveable filter has a length along the x-direction of 168 mm; and wherein the curved portion of the second moveable filter has a length along the x-direction of 34.2 mm.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Moore as modified above with the above measurements, since such a modification would have only involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. One would be motivated to make such a modification to reduce unnecessary radiation to a patient (col. 5, line 66, to col. 6, line 3) as implied from Moore.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Popescu (US Patent 6501828).

Moore as modified above suggests an apparatus as recited above.

However, Moore does not disclose dynamically positioning a moveable filter during data acquisition.

Popescu teaches dynamically positioning a moveable filter (fig. 2) during data acquisition (abstract).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Moore as modified above with the dynamic moveable filter of Popescu, since one would be motivated to make such a modification to simplify the generation of high grade x-ray images (col. 2, lines 1-7) as shown by Popescu.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore and Popescu as applied to claim 5 above, and further in view of Hsieh (US Patent 5970112).

Moore as modified above suggests an apparatus as recited above.

However, Moore does not disclose positioning based on a scout scan carried out before CT data acquisition.

Hsieh teaches positioning based on a scout scan carried out before CT data acquisition (abstract).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Moore as modified above with the positioning of Hsieh, since one would be motivated to make such a modification to make CT systems more efficient (col. 2, lines 15-16) as implied from Hsieh.

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9. Claims 11, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Hoffman et al. (US Patent 6137857).

10. Regarding claim 11, Moore discloses a system comprising a rotatable gantry having an opening (fig. 1a, #1) to receive a subject (fig. 1a, #3) to be scanned, a high frequency electromagnetic energy projection source (fig. 1a, #14) configured to project a high frequency electromagnetic energy beam toward a subject (fig. 1a, #3), a pre-subject filter assembly (fig. 1a, #26) including a pair of filters (fig. 1a, #26 on top and bottom), each filter defined by a base (fig. 2a, larger portion of #26), tail (fig. 2a, #26'), and curved portion (fig. 2a, portion between the base and tail 26') connecting the base to the tail, and wherein the pair of filters are arranged such that the curved portion of one filter (fig. 1a, #26 on top) generally faces the high frequency electromagnetic energy projection source (fig. 1a, #14) and a portion of the other filter (fig. 1a, #26 on bottom) generally faces the high frequency electromagnetic energy projection source (fig. 1a, #14), and wherein the pair of filters are align-able (figs. 1a and 2a, #30) in the high frequency electromagnetic energy beam (fig. 1a, #15) such that one filter (fig. 1a, #26 on top) is positioned more proximate the high frequency electromagnetic energy projection source (fig. 1a, #14) than the other filter (fig. 1a, #26 on bottom), a scintillation system to detect high frequency electromagnetic energy passing through the subject (col. 4, line 68), photodiodes optically coupled to the scintillation system to detect light from the scintillation system (col. 5, line 1), a data acquisition system (DAS) connected to the photodiodes and configured to receive photodiode outputs (fig. 1a, #19), and a controller (fig. 5, #36) to independently position at least one filter (fig. 5, #26) of the pair of filters in the high frequency electromagnetic energy beam

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(fig. 1a, #15) so as to modulate the beam to have a profile that substantially matches at least an approximate shape of the subject (fig. 1a, #3).

However, Moore does not specifically disclose the curved portion of the other filter generally facing the source, a scintillator array, a photodiode array, and an image reconstructor coupled to a DAS and configured to reconstruct an image of a subject from photodiode outputs received by the DAS.

Hoffman et al. teaches a scintillator array (col. 2, line 3), a photodiode array (col. 2, lines 2-3), and an image reconstructor (fig. 2, #34) coupled to a DAS (fig. 2, #34) and configured to reconstruct an image of a subject (fig. 2, #22) from photodiode outputs (fig. 2, #20) received by the DAS.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore with the curved portion of the other filter generally facing the source, since rearranging parts of an invention involves only routine skill in the art. One would be motivated to make such a modification to create more area for placing sensors and to reduce components holding sensors (fig. 3a) as implied from Moore.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore with the arrays and image reconstructor of Hoffman et al., since one would be motivated to make such a modification to increase the amount of information obtained (col. 1, lines 35-36) and to provide a better image (fig. 2, #42) of the internals of a patient (fig. 2, #22) as implied from Hoffman et al.

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11. Regarding claim 14, Moore further discloses wherein one non-uniform filter (fig. 1a, #26 on top) has an orientation that mirrors that of another non-uniform filter (fig. 1a, #26 on bottom).

12. Regarding claim 16, Moore further discloses wherein the base blocks more x-rays than that of the respective tail (fig. 2a, #26 and 26').

13. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore and Hoffman et al. as applied to claim 11 above, and further in view of Hsieh.

Moore as modified above suggests a system as recited above. Moore further discloses a filter (fig. 5, #26) operationally connected to at least one motor (fig. 5, #30) that is operationally connected to a controller (fig. 5, #36) such that control signals transmitted to the controller cause at least the one motor to position the at least one filter in a projection path to modulate the beam to have a desired profile (fig. 2a).

However, Moore does not disclose a computer programmed to cause application of a scout scan of a subject and from the scout scan determine at least an approximate shape of the subject, and wherein a filter is operationally connected to the computer to modulate the beam to have a desired profile.

Hsieh teaches a computer (fig. 2, #36) programmed to cause application of a scout scan of a subject and from the scout scan determine at least an approximate shape of the subject, and wherein a filter is operationally connected to the computer to modulate the beam to have a desired profile (abstract).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore as modified above with the scout scan and computer of Hsieh, since one would be motivated to make such a modification to make CT systems more efficient (col. 2, lines 15-16) as implied from Hsieh.

14. Claims 17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popescu in view of Toth et al. (US Patent 6307918) and Moore.

15. Regarding claim 17, Popescu discloses an apparatus comprising a moveable first filter having a curved portion (fig. 3, #22) and a moveable second filter having a curved portion (fig. 3, #23), the moveable first filter (fig. 3, #22) and the moveable second filter (fig. 3, #23) being arranged such that the moveable first filter (fig. 3, #22) and the moveable second filter (fig. 3, #23) mirror one another relative to a central axis (fig. 3, central axis from "F" past #22 and 23) of x-ray projection from an x-ray source (fig. 3, source of "F") toward a subject (fig. 1, "P").

However, Popescu does not disclose a stationary filter having a length perpendicular to the central axis of x-ray projection from an x-ray source toward a subject having a longer length, the stationary filter being positioned more proximate to the subject than another filter, a first motor assembly connected to the moveable first filter and a second motor assembly connected to a moveable second filter, and wherein the first and second motor assemblies are configured to independently position a respective filter in an x-ray path to define an attenuation profile that substantially approximates a target shape.

Toth et al. teaches a stationary filter having a length perpendicular to the central axis of x-ray projection from an x-ray source toward a subject having a longer length (fig. 5, #94). Moore teaches a first motor assembly (figs. 1a and 2a, #30) connected to the moveable first filter (figs. 1a and 2a, #26 on left) and a second motor assembly (figs. 1a and 2a, #30) connected to a moveable second filter (figs. 1a and 2a, #26 on right) and wherein the first and second motor assemblies (figs. 1a and 2a, #30) are configured to independently position overlapping filters, defined by bases, curved portions, and proximate tails, in an x-ray path to define an attenuation profile that substantially approximates a target shape (fig. 2a).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu with the filter of Toth et al., since one would be motivated to make such a modification for improving beam quality (col. 1, lines 66-67) as shown by Toth et al.

It also would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu as modified above with the stationary filter being positioned more proximate to the subject than another filter, since rearranging parts of an invention involves only routine skill in the art. One would be motivated to make such a modification to better protect sensitive moving parts of an apparatus.

It also would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu as modified above with a longer filter, since such a modification would have involved a mere change in the size of a component. One would be motivated to make such a modification better ensure that the entire beam is filtered for improving beam quality (col. 1, lines 66-67) as implied from Toth et al.

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It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu with the motors of Moore, since one would be motivated to make such a modification to provide more flexibility in shaping a profile (fig. 2a) as implied from Moore.

16. Regarding claims 19 and 20, Popescu as modified above suggests an apparatus as recited above.

However, Popescu does not disclose two motor assemblies configured to position overlapping filters, defined by bases, curved portions, and proximate tails, in an x-ray path to define an attenuation profile that substantially approximates a target shape.

Moore further teaches two motor assemblies (figs. 1a and 2a, #30) configured to position overlapping filters, defined by bases, curved portions, and proximate tails, in an x-ray path to define an attenuation profile that substantially approximates a target shape (fig. 2a).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further incorporate the apparatus of Popescu as modified above with the motors of Moore, since one would be motivated to make such a modification to provide more flexibility in shaping a profile (fig. 2a) as implied from Moore.

17. Regarding claim 21, Popescu as modified above suggests an apparatus as recited above.

However, Popescu does not disclose a stationary filter providing non-zero minimum attenuation.

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Toth et al. teaches a stationary filter providing non-zero minimum attenuation (fig. 5, #94).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further incorporate the apparatus of Popescu as modified above with the filter of Toth et al., since one would be motivated to make such a modification for improving beam quality (col. 1, lines 66-67) as shown by Toth et al.

18. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Popescu, Toth et al., and Moore as applied to claim 17 above, and further in view of Gunji et al. (JP 08-266523).

Popescu as modified above suggests an apparatus as recited above.

However, Popescu does not disclose filters with different contours.

Gunji et al. teaches filters with different contours (fig. 4, #23-1 and 23-2).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu as modified above with the filters of Gunji et al., since one would be motivated to make such a modification to make filters more suitable for an examinee (abstract, purpose) as implied from Gunji et al.

19. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popescu, Toth et al., and Moore as applied to claim 17 above, and further in view of Winter (US Patent 4998268).

Popescu as modified above suggests an apparatus as recited above.

However, Popescu does not disclose a CT system including a computer programmed to determine a target shape from a scout scan of a subject to be imaged.

Winter teaches a CT system (title) including a computer programmed to determine a target shape from a scout scan of a subject to be imaged (col. 8, line 57, to col. 9, line 11).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the apparatus of Popescu as modified above with the CT system of Winter, since one would be motivated to make such a modification to lessen risks to patients (col. 1, lines 61-64) as shown by Winter.

Response to Arguments

20. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive.

Regarding claims 1 and 11 at least, in response to Applicants' argument that there is no suggestion to modify the reference, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, the knowledge is generally available to one of ordinary skill in the art. As stated before, positioning the tail of the second filter at a distal end of the second moveable filter relative to the x-ray source is an obvious modification, since rearranging parts of an invention involves only routine skill in the art, which is knowledge generally known to one of ordinary skill in the art. Furthermore, one would be motivated to make such a modification to create more

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area for placing sensors and to reduce components holding sensors (fig. 3a) as implied from Moore. Having more area for placing sensors will create a more stable platform for the sensors (figs. 3a and 3b) and will provide a more structurally sound system. Again, this is knowledge generally known to one of ordinary skill in the art. Since these modifications are obvious to one of ordinary skill in the art, the claims of the current application are rejected as being obvious modifications of the prior art.

Furthermore, the Examiner notes that the original specification does not provide any support for any problem that may be solved for having the tails of the filters at a distal end of the filters relative to the x-ray source. It appears that the filters work equally well in either distal or proximal orientations as suggested by the original specification (figs. 5 and 6). Although, Applicants appear to point out the criticality of having a tail of a filter at a distal end of the filter relative to the x-ray source, the argument has not been given any weight. There is no evidence supporting such a position. Furthermore, the original specification does not provide any support for such a position. There isn't even the mention of scattered X-rays in the original specification. In addition, the alleged advantages do not appear to be enabled. How can a detector receive a greater amount of unattenuated scatter from a surface of the filter? If scatter is coming from a surface of the filter, is it not attenuated? Furthermore, how can the claimed structure reduce filter scatter? How can scattering be reduced by a filter that does not control the direction of the x-rays, but only the attenuation or intensity level of the scattered X-rays? Since Applicants have not provided support in the original specification and evidence, and since the alleged advantages do not appear to be enabled, Applicants' arguments have not been given any weight.

Regarding at least claim 17, Applicants argue that Moore teaches away from the combination. The Examiner disagrees. Moore was included in the combination for its teaching of motors for filters. These motors would work equally well with a system having a pair of moveable filters as well as a stationary filter. Such a modification for including motors would have been obvious, and does not teach away from the combination. Therefore, the combination is still considered obvious, and the claims remain rejected.

In conclusion, Applicants' arguments are not persuasive, and the claims remain rejected.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gk



**EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER**